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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,284	03/05/2002	Duncan Roger Harper	10660-070US (10279P1)	5606
7590	01/25/2005		EXAMINER	
Frederick H. Rabin Fish & Richardson P.C. 225 Franklin Street Boston, MA 02110			METZMAIER, DANIEL S	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/091,284	HARPER ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Daniel S. Metzmaier	1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 05 November 2004.

2a)  This action is FINAL.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 17-36 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 17-36 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

## DETAILED ACTION

Claims 17-36 are pending.

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 5, 2004 has been entered.

### ***Specification***

2. The disclosure is objected to because of the following informalities: the specification contains trademarks. They should be capitalized wherever they appear and be accompanied by the generic terminology (such as after the first occurrence). Examples are Teric 12A2 and Teric 17A2.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 17-19, 24-30, and 32-36 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for particular materials as component (d), does not reasonably provide enablement for all polar, ionic, aromatic, and linearly conjugated compounds. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Initially, applicants do not set forth explicitly or by example what is intended by the terms "linearly conjugated".

The term "conjugated" has the plain meaning of "joined together". While applicants define the arrangement as "linear", they do not define what is conjugated. Furthermore, water is polar and is not listed with the component (d) compounds in the specification. It is noted water is an additional component of the compositions employed in the claimed methods. Applicants have not adequately enable one having skill in the requisite art to make and use the scope of the invention as claimed in the above noted claims.

Looking to the originally filed examples, no mention of linearly conjugated compounds are set forth and attempting to define what is intended for said terms by placing any one exemplified material as said linearly conjugated compounds would be arbitrary and without support in the original disclosure.

To determine what compounds fall within the breadth of polar, ionic, aromatic, and linearly conjugated compounds useful in the invention that would result in the claimed conductivity ratio would require an undue amount of experimentation for the scope of the claimed invention. As noted above, water reads on polar compounds but

is provided in the comparative example as being outside the scope of the claimed invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 17-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 17 and 20 are indefinite because it is unclear what applicants intend by the claimed term "linearly conjugated". It is unclear what compounds are encompassed by linearly conjugated and/or what is conjugated. Applicants do not set forth explicitly or by example what is intended by the terms "linearly conjugated".

The claims are indefinite as to the concentrations of the individual components since it is unclear how much of a particular material, e.g., aromatic oil or solvent, should be attributed to each of the claimed components where said example reads on both components.

Claim 18 further characterizes the claimed oil or solvent (c) component as aliphatic, linearly conjugated, or aromatic compounds. Also many propellants are known solvents, many nonionic surfactants are known aromatic compounds, e.g., alkoxylated alkylphenol. Since it is unclear how much of said compounds should be attributed to each component, the claims are indefinite.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 17-19 and 25-36 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bassam et al. 5,849,264. The claims of Bassam et al. refer to an insecticidal composition in the form of water-in-

oil emulsion comprising (a) 2-80% w/w propellant, (b) 0.5-8% w/w of one more emulsifiers selected from di- and tri-sorbitan esters, polyglycerol esters, etc., (c) 1-20% w/w of a solvent selected from carboxylic acid (e.g. fatty acids column 3, lines 65-67), (d) 0.001-5% w/w of a pyrethroid insecticide and (e) water bring the total composition to 100% w/w. Component (d) comprises carboxylic acids and diethyl orthophthalate as well. The solvents of Bassam et al. are selected from fatty acid and dialkyl phthalates. Hence, as long as applicants such fatty acids cannot clearly and unambiguously demonstrate that will not fulfill the conductivity and phthalates criteria of the claims the compositions are deemed to be anticipated by Bassam et al.

Applicants set forth (paragraph [0056] of the original specification) the "compositions of the present invention, when sprayed through conventional aerosol spray heads, form droplets which are imparted with a unipolar charge of at least about  $\pm 1 \times 10^{-4}$  C/Kg". Since the compositions are anticipated and their use in conventional aerosol spray heads is disclosed, the methods as claimed are deemed anticipated.

To the extent the claims differ in the functional properties claimed, some variation of the compositions of the reference is disclosed and therefore some variation of the properties would have been expected. Applicants have not shown the properties to be critical to the invention.

11. Claims 17-19 and 25-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Stopper 4,536,323, esp. column 4, line 34 - column 5, line 19, noting also column 3, line 55 - column 4, line 19.

Sodium lauryl sulfate in the typical composition in column 4 would fulfill the conductivity criteria of claim 17 herein.

Applicants set forth (paragraph [0056] of the original specification) the "compositions of the present invention, when sprayed through conventional aerosol spray heads, form droplets which are imparted with a unipolar charge of at least about  $\pm 1 \times 10^{-4}$  C/Kg". Since the compositions are anticipated and their use in conventional aerosol spray heads is disclosed, the methods as claimed are deemed anticipated.

To the extent the claims differ in the functional properties claimed, some variation of the compositions of the reference is disclosed and therefore some variation of the properties would have been expected. Applicants have not shown the properties to be critical to the invention.

12. Claims 17-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fox et al., WO 99/21659, in view of Stopper 4,536,323, or Bassam et al. 5,849,264.

Fox et al describe an aerosol spray device and method of reducing the droplet size of a composition sprayed from such device. The preferred aerosol composition comprises an oil phase, an aqueous phase, a surfactant and a compressed propellant (page 8, lines 4-12). A charge is imparted to the liquid droplets solely by the interaction between the liquid within the aerosol spray device and the spray device itself as the liquid is sprayed therefrom (page 2, line 22 – page 3, line 22).

Fox et al differs in the particular emulsion compositions employed in the aerosol methods and the spray device of claims 21-24.

Bassam et al. refer to an insecticidal composition in the form of water-in-oil emulsion comprising (a) 2-80% w/w propellant, (b) 0.5-8% w/w of one more emulsifiers selected from di- and tri-sorbitan esters, polyglycerol esters, etc., (c) 1-20% w/w of a solvent selected from carboxylic acid (e.g. fatty acids column 3, lines 65-67), (d) 0.001-5% w/w of a pyrethroid insecticide and (e) water bring the total composition to 100% w/w. Component (d) comprises carboxylic acids and diethyl orthophthalate as well.

Stopper, 4,536,323, esp. column 4, line 34 - column 5, line 19, noting also column 3, line 55 - column 4, line 19. Sodium lauryl sulfate in the typical composition in column 4 would fulfill the conductivity criteria of claim 17 herein.

Fox et al (page 7, line 32 et seq) discloses that changes in the product formulation can affect the charging levels. Fox et al further teaches that an emulsion of an immiscible hydrocarbon and water will carry a higher charge to mass ratio when sprayed from the aerosol device than either water or hydrocarbon alone.

These references are combinable because they teach aerosols and emulsions employed in said aerosols. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the compositions of Bassam et al or Stopper in the aerosol devices of Fox et al (see page 4, lines 29 et seq) for the advantage of imparting a charge to said aerosol droplets, which has the effect of said droplets repelling each other, increased spread, and smaller droplet size of the aerosol.

Applicants set forth (paragraph [0056] of the original specification) the "compositions of the present invention, when sprayed through conventional aerosol spray heads, form droplets which are imparted with a unipolar charge of at least about

$\pm 1 \times 10^{-4}$  C/Kg". Since the compositions are anticipated and their use in conventional aerosol spray heads is disclosed, the methods as claimed are deemed anticipated.

To the extent the claims differ in the functional properties claimed, some variation of the compositions of the reference is disclosed and therefore some variation of the properties would have been expected. Applicants have not shown the properties to be critical to the invention.

### ***Response to Arguments***

13. Applicant's arguments filed October 28, 2004 have been fully considered but they are not persuasive.

14. Applicants (page 11) assert the Bassam et al and Stopper references do not disclose the claimed methods. In light of the fact that applicants admit that the compositions form unipolar charged droplets in conventional aerosol devices and the compositions are anticipated, it is reasonable to conclude that the formation of an aerosol in a conventional aerosol device results in an aerosol of unipolar charged droplets.

15. Applicants (pages 11 and 12) assert Fox et al discloses the charge is imparted to the aerosol droplets as a result of the interaction between the aerosol device and the aerosol composition and said interaction is not required in claims 17-19 and 25-36. While said interaction is not required by the instant claims 17-19 and 25-36, said interaction is not excluded by the claims. The claims do not patentably distinguish over the Fox et al reference based on this asserted issue.

16. Applicant's remaining arguments with respect to claims 20-24 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Daniel S. Metzmaier  
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Art Unit 1712

DSM